

## REMARKS

Reconsideration of the above-identified patent application in view of the amendments above and the remarks following is respectfully requested.

Claims 1, 5, 7, 9-11 and 13-23 are in this case. Claims 1, 5, 7 and 13-23 have been rejected under § 102(b). Claims 9-11 have been objected to. Independent claims 1, 16, 18 and 19 and dependent claims 5, 7, 9, 13, 14 and 22 have been canceled. Independent claim 20 and dependent claim 10 have been amended.

The claims before the Examiner are directed toward an electronic module that includes electronic circuitry and first and second electrical connection mechanisms, both operationally connected to the electronic circuitry, for mounting the module on a printed circuit board by different respective methods, *e.g.*, robotic mounting vs. manual mounting. It suffices to mount the module using only one of the electrical connection mechanisms, either the first electrical connection mechanism or the second electrical connection mechanism, in order for the module to be fully operational.

### § 102(b) Rejections – Crane, Jr. et al. ‘086

The Examiner has rejected claims 1, 15, 17, 19 and 21-23 under § 102(b) as being anticipated by Crane, Jr. et al., US Patent No. 6,097,086 (henceforth, “Crane, Jr. et al. ‘086”). The Examiner’s rejection is respectfully traversed.

Claims 1, 19 and 22 have been canceled, thereby rendering moot the Examiner’s rejection of these claims.

Crane, Jr. et al. ‘086 teach, in Figures 76-79, four semiconductor die carriers in which a semiconductor die **11** is connected to two different kinds of mechanisms for operationally connecting semiconductor die **11** to another device such as a printed

circuit board. For example, in the embodiment of Figure 78 specifically cited by the Examiner, semiconductor die 11 is connected to leads 18 via solder balls 23 and to leads 40 via bonding pads 38.

The context for understanding Figures 76-79 of Crane, Jr. et al. '086 is provided by Figure 73 that shows a semiconductor die carrier in which semiconductor die 11 is connected to different leads 18 and different leads 40 via different bonding pads 38. Each lead 18 or 40 is connected to a *different* respective bonding pad 38 on semiconductor die 11. Similarly, in the semiconductor die carrier of Figure 78, each lead 40 is connected to a respective bonding pad 38 on semiconductor die 11 by a respective bonding wire 22 and each lead 18 is connected to a respective contact on semiconductor die 11 via a respective C4 interconnect. Just as the semiconductor die carrier of Figure 73 must be mounted using all of its leads 18 and 40 to be fully operational, so the semiconductor die carrier of Figures 78 must be mounted using all its leads 18 and 40 to be fully operational. By contrast, the electronic module of the present invention, as recited in independent claims 15, 17, 21 and 23, is rendered fully operational when mounted using *either* connection mechanism. For example, in the embodiment of the present invention illustrated in Figure 8 of the above-identified patent application, every plug 2 is operationally connected to a corresponding BGA 1 and every BGA 1 is connected to a corresponding plug 2, so that the illustrated electronic module is fully operational whether mounted using BGAs 1 or plugs 2.

Thus, the present invention, as recited in independent claims 15, 17, 21 and 23, is not anticipated by Crane, Jr. et al. '086. Furthermore, the present invention, as recited in independent claims 15, 17, 21 and 23, is not obvious from Crane, Jr. et al. '086. There is neither a hint nor a suggestion in Crane, Jr. et al. '086 of configuring the semiconductor die carriers to be fully operational when mounted using *either*

leads 18 or leads 40, for example by bonding each bonding pad 38 to both a lead 18 and a lead 40.

#### **§ 102(b) Rejections – Hinrichsmeyer et al. '587**

The Examiner has rejected claims 1, 5, 7, 13, 14, 18-20 and 22 under § 102(b) as being anticipated by Hinrichsmeyer et al., US Patent No. 4,996,587. The Examiner's rejection is respectfully traversed.

Claims 1, 5, 7, 13, 14, 18, 19 and 22 have been canceled, thereby rendering moot the Examiner's rejection of these claims.

As discussed below, claim 20 has been placed in condition for allowance by the inclusion therein of the limitations of claim 9.

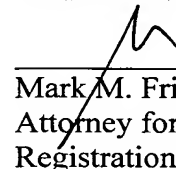
#### **Objections**

The Examiner has objected to claims 9-11 as being based on rejected base claims. The Examiner has noted that claims 9-11 would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claim.

Claim 9 has been rewritten in independent form by amending claim 20 to include the limitations of claim 9. Correspondingly, claim 9 has been canceled and claim 10 has been amended to depend directly from claim 20.

In view of the above amendments and remarks it is respectfully submitted that independent claims 15, 17, 20, 21 and 23, and hence dependent claims 10 and 11 are in condition for allowance. Prompt notice of allowance is respectfully and earnestly solicited.

Respectfully submitted,



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